

## Research Article

## Social Support and Postpartum Depression in Human Immuno Deficiency Virus (HIV) Patients

### *Hubungan Dukungan Sosial terhadap Depresi Pascapersalinan pada Pasien Human Immuno Deficiency Virus (HIV)*

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#### Abstract

**Objective:** To evaluate the relationship between social support given to HIV patients with the incidence of postpartum depression.

**Method:** All HIV patients who had delivery in Dr. Cipto Mangunkusumo hospital and Prof. dr. Sulianti Saroso hospital during the period of October 2012 to March 2013 were enrolled as research subjects. We performed depression screening with the Edinburgh Postnatal Depression Scale (EPDS) and to measure the social support provided by Social Support Questionnaire/*Kuesioner Dukungan Sosial* (KDS). Statistical analysis was done using Fisher's exact test, Chi-square and unpaired t-test.

**Result:** We found a total of 34.1% of subjects who experienced postpartum depression, in which 40% did not received proper social support. Considering the demographic characteristics of the subjects who experienced depression, 70% was in age group 20-35 years, 56.7% of subjects had low education level and 70% was primiparous.

**Conclusion:** Social support has a protective effect towards postpartum depression in HIV patients.

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**Keywords:** Edinburgh postnatal depression scale, HIV, (*kuesioner dukungan sosial*), postpartum depression, social support

#### Abstrak

**Tujuan:** Untuk menilai hubungan antara dukungan sosial yang diberikan terhadap angka kejadian depresi pascapersalinan pada pasien HIV.

**Metode:** Pasien HIV yang melahirkan di RSUPN dr. Cipto Mangunkusumo dan RSPI Prof. dr. Sulianti Saroso periode Oktober 2012 hingga Maret 2013 diikutsertakan sebagai subjek penelitian. Dilakukan skrining depresi dengan Edinburgh Postnatal Depression Scale (EPDS) dan mengukur dukungan sosial yang diberikan dengan KDS. Analisis statistik menggunakan uji Fisher, Chi-Square dan uji t tidak berpasangan.

**Hasil:** Sebanyak 34,1% subjek mengalami depresi pascapersalinan dan didapatkan bahwa 40% yang mengalami depresi pascapersalinan tersebut tidak mendapatkan dukungan sosial yang baik. Dari karakteristik subjek yang mengalami depresi tersebut, 70% berasal dari kelompok usia 20-35 tahun. Berdasarkan tingkat pendidikan, 56,7% subjek yang mengalami depresi diketahui berpendidikan rendah. Dari status paritas didapatkan 70% yang mengalami depresi pascapersalinan merupakan primipara.

**Kesimpulan:** Dukungan sosial merupakan efek protektif terhadap terjadinya depresi pascapersalinan pada pasien HIV.

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**Kata kunci:** depresi pascapersalinan, dukungan sosial, Edinburgh postnatal depression scale, *kuesioner dukungan sosial*, HIV

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## INTRODUCTION

Pregnancy, childbirth and being a mother are important events in the life of a woman. At this period of time, the role and demands of the woman may change. In general, most women experience emotional disturbances after childbirth due to a variety of significant biological and psychological changes related to mother and baby.<sup>1,2</sup>

There are three main kinds of mood disorders in the postpartum period, which are postpartum

blues, postpartum depression and postpartum psychosis. Postpartum blues is a temporary condition characterized by mood instability, irritability and frequent crying occurring in the first two weeks after delivery. Postpartum depression is a mental disorder that occurs in non-psychotic patient six weeks after giving birth. Usually, the patient is not aware of what is happening. Symptoms are characterized by irritability, feelings of guilt, anxiety, fatigue, sleep disturbances, and other somatic symptoms. Meanwhile, postpartum psychosis is a more

severe condition that is characterized by hallucinations and delusions.<sup>1-3</sup>

Previous studies found that in western countries, the incidence of postpartum depression is approximately 15%-20% of women who gave birth, both for first-time deliveries as well as subsequent deliveries. A study from 1995 discovered that the incidence of postpartum depression in Malaysia is 3.9%, while in Singapore the incidence is only 1%. From studies that have been conducted during the period of 1998-2001 in various places in Indonesia, including Jakarta, Yogyakarta and Surabaya, the incidence rate of postpartum depression was found to range between 11%-30%.<sup>4-6</sup>

A study from South Africa found that the prevalence of postpartum depression in HIV patients ranged between 42.2%-45.1%. Hatley et al found the prevalence of postpartum depression in patients with HIV in Cape Town was 42.2%. This study revealed that the major predictive factors for postpartum depression in HIV patients are history of STD in past year, stigma from surrounding environment, discrimination and lack of social support. The presence of social support on pregnant women with HIV can have a positive impact. The concept of social support was first described in 1970 by Brown et al. Social support is multidimensional. According to Schaefer et al social support is defined as any offering including emotional support, provision of positive information and other tangible support.<sup>1,7,8</sup>

## METHODS

The study design was cross-sectional observational study with consecutive sampling method. It was conducted from October 2012 to March 2013 in Dr. Cipto Mangunkusumo hospital (RSCM) and Prof. dr. Sulianti Saroso hospital. Inclusion criteria for this study were women with HIV positive status who had no history or is suffering from a psychiatric disorder at the time of the study, planning to have elective cesarean section delivery and obtain postpartum care in RSCM and Sulianti Saroso hospital. During the study period, we obtained 88 samples meeting the inclusion criteria for the Edinburgh Postpartum Depression Scale (EPDS) questionnaire at two weeks postpartum and six weeks postpartum. From the samples included, the distribution of sample consists of 39 subjects obtained

from RSCM outpatient clinic and 49 samples from Sulianti Saroso outpatient clinic. To measure the level of social support received by the subjects, we utilized the Social Support Questionnaire/*Kuesioner Dukungan Sosial* (KDS) form.

## RESULT

From the data, we found 79.5% of our samples to be in the age group of 20-35 years, while the highest proportion in educational level was in the middle education level (56.8%). Considering parity status, most of our respondents (71.6%) were primiparous.

**Table 1.** Demographic Characteristic.

	Depression state		p
	Depression (n=30)	Not in Depression (n=58)	
<b>Age</b>			
< 20 year	8 (26.7%)	9 (15.5%)	p=0.496*
20 - 35 year	21 (70.0%)	49 (84.5%)	
> 35 year	1 (3.3%)	0 (0%)	
<b>Education Level :</b>			
Low	17 (56.7%)	19 (32.8)	p=1.063*
Middle	12 (40.0%)	38 (65.5%)	
High	1 (3.3%)	1 (1.7%)	
<b>Parity :</b>			
Primiparaous	21 (70.0%)	42 (72.4%)	p=0.812†
Multiparaous	9 (30.0%)	16 (27.6%)	
<b>Occupation :</b>			
Working	3 (10.0%)	8 (13.8%)	p=0.743 ‡
Not working	27 (90.0%)	50 (86.2%)	

\* Kolmogorov Smirnov † Chi-Square ‡ Fisher

From Table 1, we found no statistically significant relation between depression status with age ( $p>0.05$ ). The highest prevalence of depression occurs in the 20-35 years old age group, with 21 respondents belonging to the group. From education level, we found no statistically significant relation between depression status and education level ( $p>0.05$ ). We also found no statistically significant relation between depression status and occupation in our subjects ( $p>0.05$ ).

**Table 2.** Comparison of Postpartum Depression in Two Periods of Time.

Depression State	EPDS 1 (n%)	EPDS 2 (n%)
Depression	24 (27.3%)	17 (19.3%)
Not depression	64 (72.7%)	71 (80.7%)

Assessment of postpartum depression was conducted twice, two weeks postpartum and six weeks postpartum. From Table 3 below, we identified three groups of subjects with postpartum depression: postpartum depression at the time of the first and second assessment, those who experienced postpartum depression in the first assessment but not at the second assessment, those not experiencing postpartum depression at the first assessment but experienced postpartum depression at the second assessment. Table 3 shows that as many as 24 subjects (27.3%) experienced postpartum depression at 2 weeks postpartum and 17 subjects (19.3%) experienced postpartum depression based on the assessment carried out at 6 weeks postpartum.

Of the total 88 respondents, we observed 30 subjects (34.1%) who experienced postpartum depression, which consisted of 11 respondents

(12.5%) experiencing postpartum depression at two weeks and six weeks postpartum, 13 subjects (14.8%) experienced postpartum depression at the first assessment (two weeks postpartum) but not experiencing depression at the second assessment (six weeks postpartum), then there were 6 (6.8%) respondents who experienced postpartum depression only on the second assessment. Statistical evaluation by Chi-Square test showed that the value of  $p < 0.001$ , meaning that there was a significant difference in the incidence of postpartum depression conducted at two weeks postpartum and six weeks postpartum.

We observed that at the time of assessment there were 30 respondents (34.1%) who experienced postpartum depression, in which 18 respondents (20.4%) received poor social support, while 12 respondents (13.6%) received adequate support. There were 58 (65.9%) respondents who did not experience depression; 46 of which (52.3%) received proper social support, while the rest (13.6%) received improper social support. In the Chi-Square test of significance, we found a significant association between the incidence of postpartum depression pregnant patients with HIV and the social support given to them.

**Table 3.** Distribution of Postpartum Depression Based on Time of Assessment.

Postpartum depression	6 weeks postpartum		Total	Statistic
	Depression	Not Depression		
2 weeks postpartum				
Depression	11	13	24	p=0.001*
Not depression	6	58	64	
Total	17	71	88	

\*Chi Square

**Table 4.** Relation between Incidence of Postpartum Depression and Social Support.

	Postpartum depression		n	PR (CI 95%)	p
	Depression	Not depression			
Social support					
Proper	12	46	58	0.33 (1.24-1.44)	p=0.000*
Improper	18	12	30		
Total	30	58	88		

\*Chi Square

## DISCUSSION

Assessment of depression in this study used the questionnaire tool from EPDS, which are administered at two weeks and six weeks postpartum. This is consistent with the definition of postpartum depression where the earliest onset of postpartum depression was detected at two weeks postpartum. It is also distinguished from the incidence of postpartum blues, which happens shortly after birth up to two weeks postpartum.<sup>1-3</sup>

In this study, we found that postpartum depression assessment at two weeks postpartum and six weeks postpartum gave statistically significant results. Whereas previous research conducted by Alfiben et al found that assessment of postpartum depression using EPDS conducted at 48 hours and 2 weeks postpartum did not provide statistically significant difference so only one time assessment is required.<sup>7</sup> Our data was similar with Milgrom et al, who observed the need of EPDS assessment at two weeks and six weeks postpartum to exclude the occurrence postpartum blues which only lasts up to two weeks postpartum.<sup>1-3,9</sup>

From this study we found that the prevalence of postpartum depression in HIV patients was 34.1%. At the first assessment we found 27.3% of subjects experienced postpartum depression and 19.3% experienced postpartum depression on the second EPDS assessment. Since the EPDS assessment at two weeks postpartum and six weeks postpartum was found to be statistically significant ( $p=0.001$ ), the prevalence of postpartum depression can be divided into 3 groups: those who experience postpartum depression on the EPDS assessment at 2 weeks and 6 weeks postpartum, those experiencing postpartum depression only at two weeks postpartum and those who experienced postpartum depression after six weeks postpartum.

In Table 4, we found a significant relationship ( $p=0.001$ ) between the incidence of postpartum depression in patients with HIV and social support given to the patients. Although this study did not evaluate factors that influence social support on the incidence of postpartum depression, but the data showed that factors such as age group, education level, parity and employment status did not affect the incidence of postpartum depression in these HIV patients.

Assessment of social support in this study utilized KDS, which consists of 24 questions representing the six components assessed consisting of support from the husband, parents, siblings and in-laws. While the environment components also include close family, friends and neighbour.<sup>6,10</sup> In this assessment we found a significant association between the incidence of postpartum depression with social support during pregnancy and after delivery.

## CONCLUSION

The prevalence of postpartum depression in patients with HIV in RSCM and Sulianti Saroso hospital was 34.1%. Poor social support is a risk factor for the occurrence of postpartum depression in patients with HIV.

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